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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,230	10/16/2003	Stephen Owens	PC3-056	2467

21567 7590 02/17/2005  
WELLS ST. JOHN P.S.  
601 W. FIRST AVENUE, SUITE 1300  
SPOKANE, WA 99201

EXAMINER
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PRICE, ELVIS O

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/688,230

**Applicant(s)**

OWENS ET AL.

**Examiner**

Elvis O. Price

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 36-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10.11/04; 4.7.12/04.</u> | 6) <input type="checkbox"/> Other: ____  |

### **DETAILED ACTION**

Claims 36-48 are pending in the application.

#### ***Priority***

Applicant has complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120.

#### ***Information Disclosure Statement***

The information disclosure statements (IDS) are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 43-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, independent claim 43 makes reference to an alkene solution comprising a haloalkene in which the mixture (alkene solution comprising a haloalkene) has a mole ratio of the alkene solution to the haloalkene of at least 1.07:1. However, such subject matter is not supported by the specification. The Examiner does not see where an alkene solution comprising a

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haloalkene and/or the mole ratio requirement of the alkene solution to the haloalkene is recited in the present specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 36, 37, 38, 40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson et al. {US Pat. 6,313,360}.

Wilson et al. disclose the presently claimed process for preparing halogenated alkanes (e.g., 1,1,1,3,3-pentachloropropane) by reacting a haloalkane (e.g., carbon tetrachloride) and a haloalkene (e.g., vinyl chloride) in the presence of an alkyl phosphate (e.g., tributyl phosphate) (see Col. 2, lines 49-67 and Examples 1, 2 and 7).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 36, 37, 39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. {6,313,360}, in view of Nakada et al. {6,316,682}.

Applicants claim, in brief, a process for preparing halogenated alkanes as defined by independent claim 1, wherein the reaction pressure is from about 5 to about 15 psig and wherein the halogenated alkane (i.e., 1,1,1,3,3-pentachloropropane) is further converted to a fluorinated alkane (i.e., 1,1,1,3,3-pentafluoropropane).

Wilson et al. teach a process for preparing 1,1,1,3,3-pentachloropropane comprising reacting carbon tetrachloride and vinyl chloride in the presence of tributyl phosphate (see Col. 2, lines 49-67 and Examples 1, 2 and 7). The difference between the presently claimed invention and what is taught by the Wilson et al. reference is that Wilson et al. do not exemplify a process carried out at a pressure from about 5 to about 15 psig and Wilson et al. do not teach converting the 1,1,1,3,3-pentachloropropane to 1,1,1,3,3-pentafluoropropane. However Wilson et al. generally teach that the reaction is carried out at a reactor pressure of from 10 to 100 psig (see Table I).

Nakada et al. teach a process for preparing 1,1,1,3,3-pentafluoropropane comprising converting 1,1,1,3,3-pentachloropropane to the said 1,1,1,3,3-pentafluoropropane (see Examples 1-3).

It would have been *prima facie* obvious to one having ordinary skill in the art, in view of the Wilson et al. and the Nakada et al. references, to prepare halogenated alkanes (e.g., 1,1,1,3,3-pentachloropropane or 1,1,1,3,3-pentafluoropropane) as

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presently claimed because Wilson et al. teach a process for preparing halogenated alkanes (e.g., 1,1,1,3,3-pentachloropropane) by reacting a haloalkane (e.g., carbon tetrachloride) and a haloalkene (e.g., vinyl chloride) in the presence of an alkyl phosphate (e.g., tributyl phosphate), wherein the reactor pressure can range from 10 to 100 psig and Nakada et al. teach a process in which 1,1,1,3,3-pentachloropropane can be converted to 1,1,1,3,3-pentafluoropropane.

One having ordinary skill in the art would have been motivated, in view of the above references, to prepare halogenated alkanes according to the Wilson et al. process using a reactor pressure from 10 to 100 psig because the Wilson et al. process is recognized as an improved process (for the production of 1,1,1,3,3-pentachloropropane) which enhances throughput, extends catalyst life and maximizes feedstock conversion (see Col. 1, lines 63-67). Additionally, one of ordinary skill in the art, desiring to arrive at other alternative methods of preparing 1,1,1,3,3-pentafluoropropane, which may be utilized as a refrigerant, detergent, propellant, etc., would have been motivated to combine the Wilson et al. process for preparing 1,1,1,3,3-pentachloropropane with the Nakada et al. process for converting 1,1,1,3,3-pentachloropropane to 1,1,1,3,3-pentafluoropropane.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 571 272-0644. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571 272-0646. The fax phone

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numbers for the organization where this application or proceeding is assigned is 571  
273-8300.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the receptionist whose telephone number is 703 308-  
1235.



Elvis O. Price

February 15, 2005